U.S. Department of Education

Introduction to PISA

Understanding Student Achievement in a Global Context

June 21, 2012

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PISA USA

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Institute of Education Sciences

Welcome to the U.S. PISA Team!

PISA
USA

Overview

- What is PISA?
- Players and Participation
- PISA and Other Assessments
- Administration and Challenges
- PISA 2012 Timeline
- PISA Release and Publication

What is PISA?

PISAUSA

- **is an ongoing, periodic international comparative survey managed cooperatively by the Organization for Economic Co-operation and Development (OECD).**
- **assesses reading, mathematics, and science literacy of 15-year-olds.**
- **focuses on the application of knowledge and skills acquired in and outside of school to problems with a real-life context.**

Three Main Questions

PISAUSA

1. Are students well prepared to meet the challenges of the future?

2. Are they able to analyze, reason, and communicate their ideas effectively? and

3. Do they have the capacity to continue learning throughout life?

Players

Organization for Economic Cooperation and Development (OECD)	Coordinates PISA
PISA Governing Board (PGB)	A board made up of representatives of participating countries, sets policy for PISA
Australian Council for Educational Research (ACER) **and a consortium of contractors**	Design and implement PISA at the international level
Subject Matter Expert Groups and **Questionnaire Expert Group**	Provide expertise and guidance on frameworks and instruments
National Program Managers (NPM)	Coordinate administration within the countries

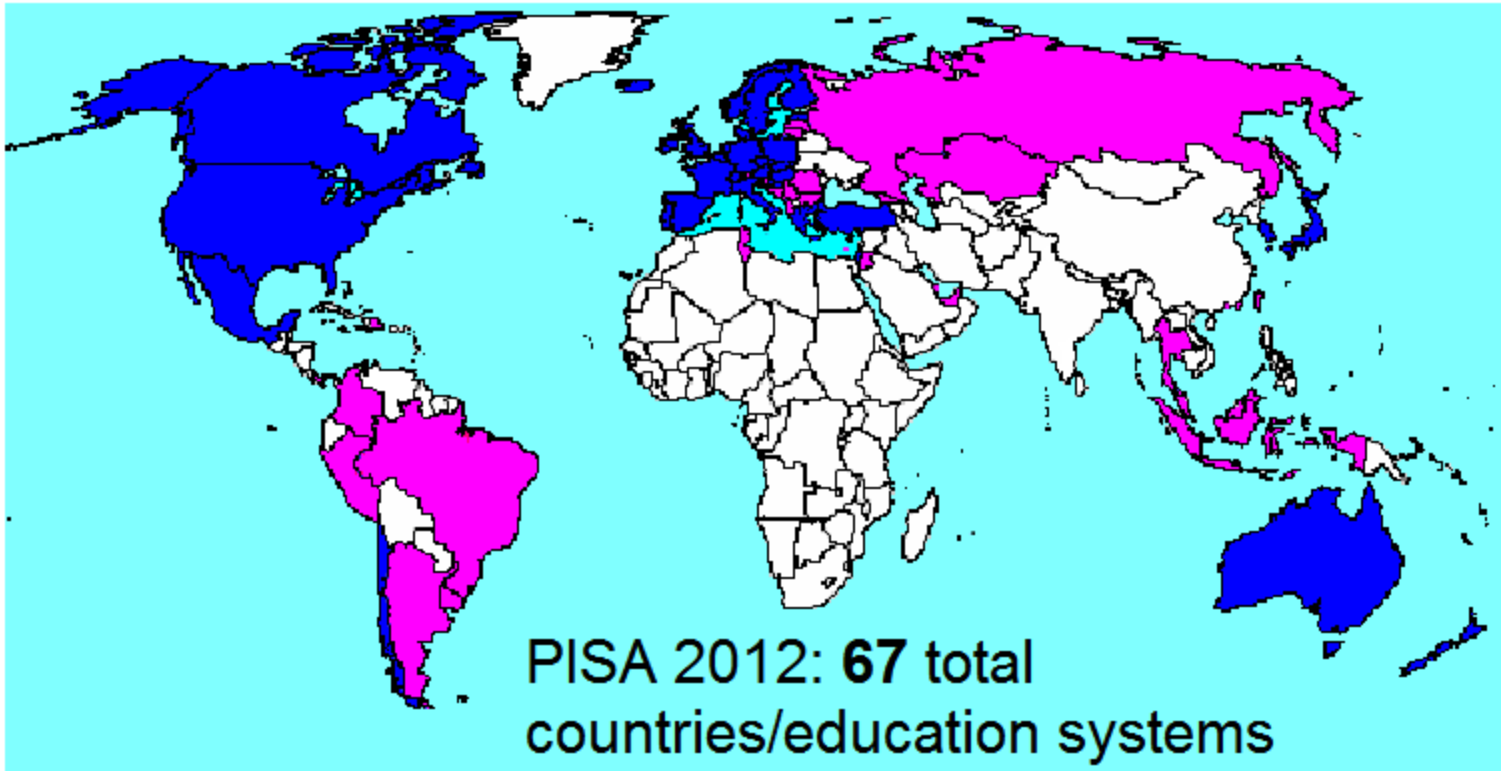
Players (cont.)

National Center for Education Statistics (NCES)	Coordinates and funds PISA in the United States
NCES Contractors	• Westat is the U.S. national contractor for PISA 2012 • Pearson and Hager Sharp are subcontractors to Westat

NCES International Study Programs

Study	What?	Who?	When?	How many countries currently?
PISA	Reading, mathematics, science literacy, problem solving and financial literacy	15-year-olds	Every 3 years (started in 2000)	67
PIRLS	Reading literacy	4th-graders	Every 5 years (started in 2001)	49
TIMSS	Mathematics and Science	4th- and 8th-graders	Every 4 years (started in 1995)	52 (gr. 4) 45 (gr. 8)
PIAAC	Literacy, numeracy, and problem solving in technology-rich environments	16 – 65 year-olds	Every 10 years (started in 2011)	24
TALIS	Background and professional development; school leadership, management, staffing, funding, climate, and ethos; and teacher appraisal, induction, instructional approaches, pedagogical practices, efficacy, and job satisfaction	Teachers and principals	Every 5 years (start in 2013)	33

Participation



OECD countries (34)

Non-OECD education systems (33)

Differences Between PISA and NAEP

Some differences are similar to those between PISA and TIMSS/PIRLS

PISA	vs	NAEP
"Yield" Study		Curriculum-Based
Age-Based		Grade-Based
Designed to detect relatively large differences across countries		Designed to detect smaller differences within the United States
U.S. samples are smaller		U.S. samples are larger

PISA Administration Cycle

Assessment Year	Subjects Assessed
2000	**READING**, Mathematics, Science
2003	Reading, **MATHEMATICS**, Science, Problem Solving
2006	Reading, Mathematics, **SCIENCE**
2009	**READING**, Mathematics, Science
2012	Reading, **MATHEMATICS**, Science, Problem Solving
2015	Reading, Mathematics, **SCIENCE**

Note: Reading, mathematics, and science literacy are all assessed in each assessment cycle of PISA. The subject in all capital letters is the major subject area for that cycle. A paper-based problem solving assessment was administered in 2003, and a computer-based problem solving assessment will be administered in 2012.

PISA 2012 Components

Core

- **Mathematics**, reading, and science literacy (paper-based)
- Problem solving (computer-based)

International Options

- Computer-based mathematics and reading
- Financial literacy (paper-based)

How PISA is Conducted

Sampling

Instruments

Data Collection and Scoring

Data Processing, Analysis and Reporting

How PISA is Conducted (cont.)

- Representative samples of 15-year-old students
- Minimum sample of 150 schools, 4500 students; U.S. typically 165 schools, 5200 students
- International consortium draws school sample

Sampling

How PISA is Conducted (cont.)

Instruments

- **Developed by international consortium (and assessment items also by countries); expert groups and countries review; MS items selected based on FT results, plus trend items**

- **Adaptations: Assessment items (e.g., color vs. colour) and questionnaires (add national questions, e.g., race/ethnicity); reviewed and approved by consortium**

How PISA is Conducted (cont.)

Data Collection and Scoring

- International manuals document standards and procedures
- Countries adapt manuals; approved by consortium
- International Quality Control Monitors

How PISA is Conducted (cont.)

Data Processing, Analysis and Processing

- **Consortium processes and scales all countries' data; countries review**
- **OECD produces international reports and data files**
- **Countries release own reports and other products**

PISA Administration

All students:

- Two 1-hour paper and pencil assessment sessions
- 35 minutes student background questionnaire

20 sampled students:

- One-hour and 20 minutes computer-based assessment session

Principals from each school:

- 30 minutes school questionnaire

Challenges

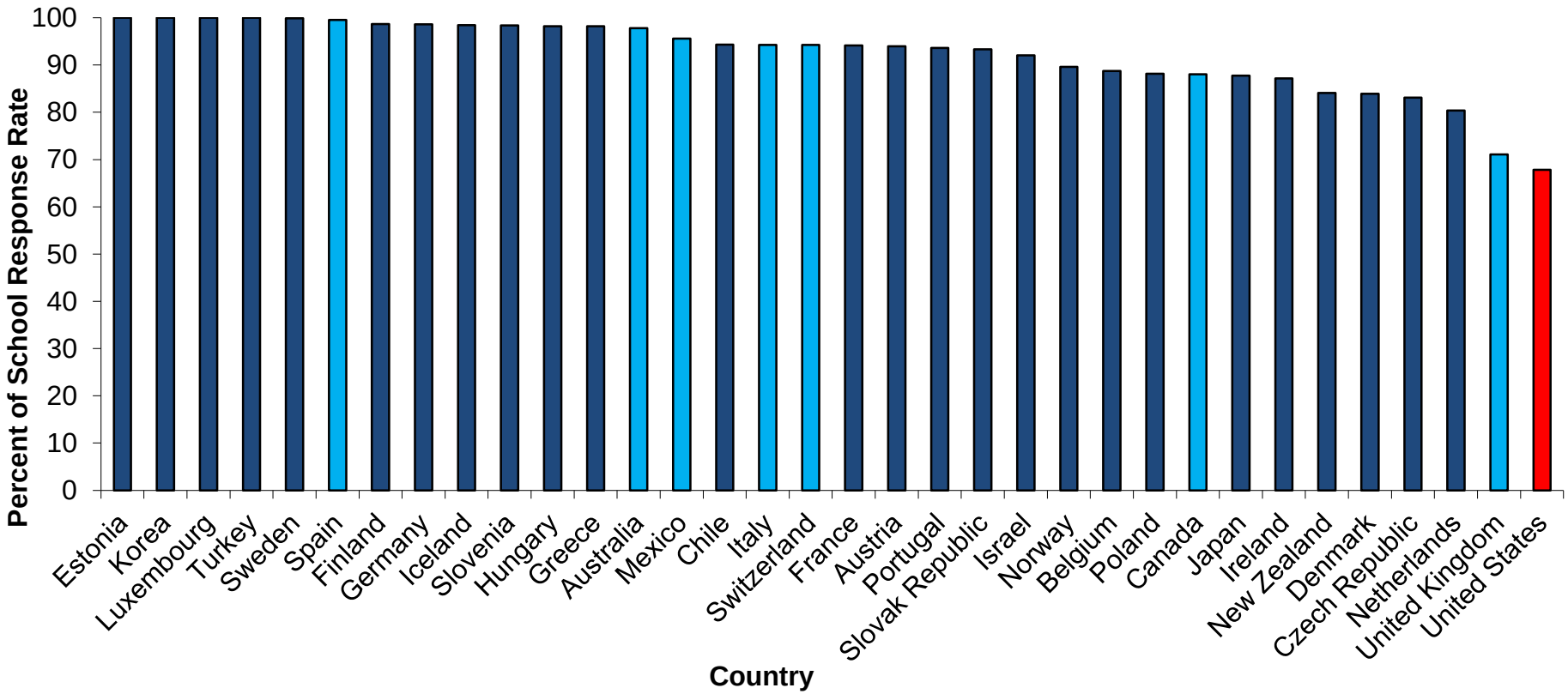
PISA moving from primarily paper-based assessment to computer-based assessment

U.S. participating in computer-based for first time in 2012

Computer-based assessments will be administered in 2015 and beyond

Achieving acceptable **response rates**

PISA 2009 Original School Response Rate by 34 OECD Countries



U. S. PISA Sample

Assessment Year	Number of Participating Students	Number of Participating Schools	Overall Student Response Rate (%)	School Response Rate (%)	
				Before Placement	After Placement
2000	3,700	145	85	56	70
2003	5,456	262	83	65	68
2006	5,611	166	91	69	79
2009	5,233	165	87	68	78

PISA 2012 Timeline

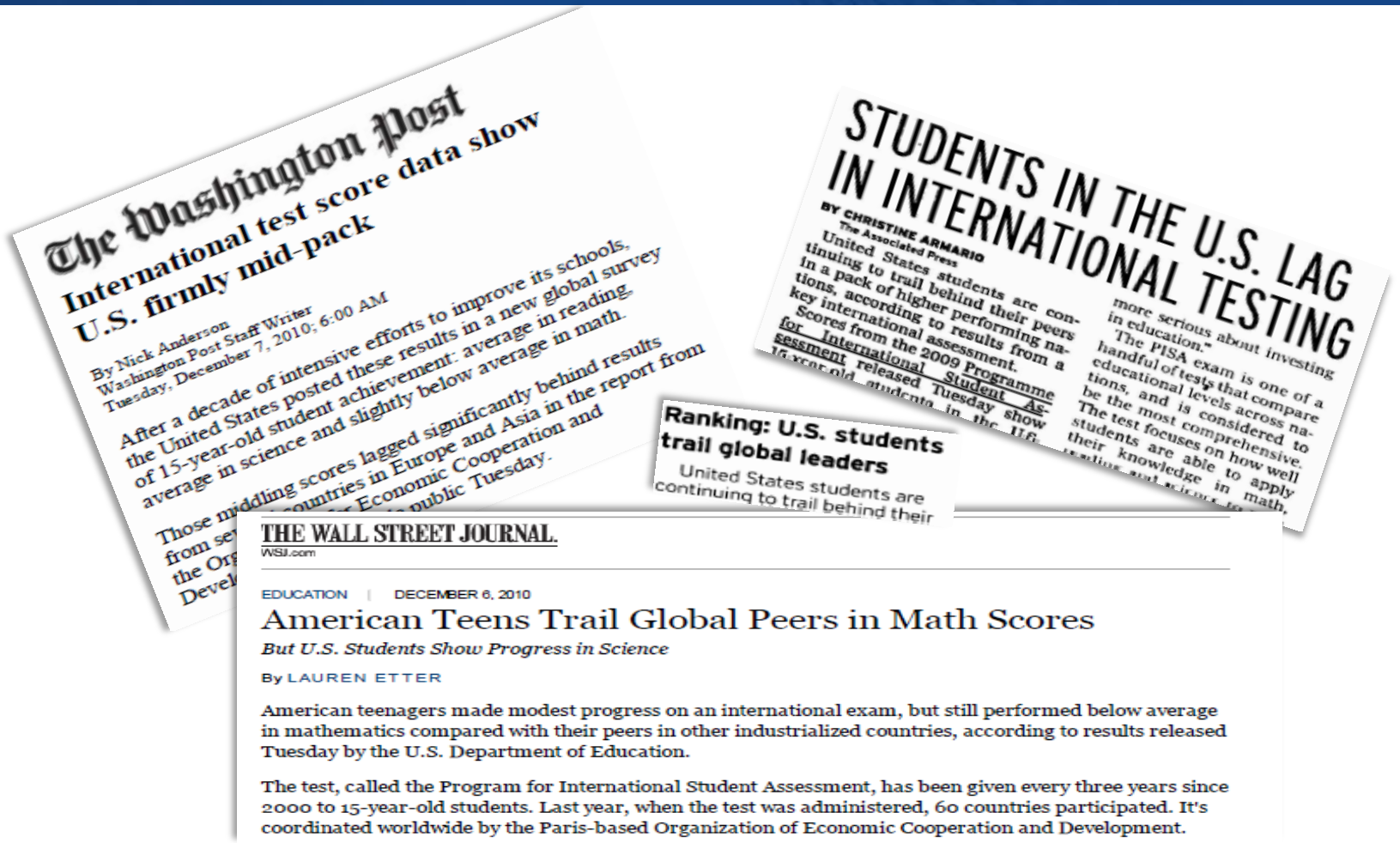
TASK	DATE
Instruments and manuals adaptations and approval Conducted the Field Trial in Spring 2011 School Recruiting Finalizing instruments for main study	Feb. 2010 – ongoing
PISA Summer Conference	June 2012
Main Study Data collection (Oct. 09 – Nov. 16, 2012), coding, data cleaning and submission, data verification and approval	Oct. 2012 – Sept. 2013
Reporting Release of PISA 2012 national and international reports	Early Dec. 2013
School Reporting Preliminary school report Final school report	Before release of PISA Report in Dec. 2013 Spring 2014

Reports and Publications

OECD: PISA international results with multi-volume report, international data files and country 'profiles' online tool, thematic reports, technical report, PISA in Focus, PISA video

U.S.: NCES 'Highlights' Report, International Data Explorer (IDE); U.S. data files with U.S.–specific variables; school reports

Media Coverage



The Washington Post

International test score data show U.S. firmly mid-pack

By Nick Anderson
Washington Post Staff Writer
Tuesday, December 7, 2010; 6:00 AM

After a decade of intensive efforts to improve its schools, the United States posted these results in a new global survey of 15-year-old student achievement: average in reading, average in science and slightly below average in math.

Those middling scores lagged significantly behind results from countries in Europe and Asia in the report from the Organization for Economic Cooperation and Development, made public Tuesday.

STUDENTS IN THE U.S. LAG IN INTERNATIONAL TESTING

BY CHRISTINE ARMARIO
The Associated Press

United States students are continuing to trail behind their peers in a pack of higher performing nations, according to results from a key international assessment.

Scores from the 2009 Programme for International Student Assessment released Tuesday show 15-year-old students in the U.S.

more serious about investing in education."

The PISA exam is one of a handful of tests that compare educational levels across nations, and is considered to be the most comprehensive. The test focuses on how well students are able to apply their knowledge in math,

Ranking: U.S. students trail global leaders

United States students are continuing to trail behind their

THE WALL STREET JOURNAL.
WSJ.com

EDUCATION | DECEMBER 6, 2010

American Teens Trail Global Peers in Math Scores

But U.S. Students Show Progress in Science

By LAUREN ETTER

American teenagers made modest progress on an international exam, but still performed below average in mathematics compared with their peers in other industrialized countries, according to results released Tuesday by the U.S. Department of Education.

The test, called the Program for International Student Assessment, has been given every three years since 2000 to 15-year-old students. Last year, when the test was administered, 60 countries participated. It's coordinated worldwide by the Paris-based Organization of Economic Cooperation and Development.

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Thank you for your participation in PISA 2012!

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